

Ninth Anniversary of Assassination

Pathologist's View of JFK Autopsy: An Unsolved Case

CYRIL H. WECHT, M.D., J.D., F.C.A.P.

The assassination of President John F. Kennedy in Dallas nine years ago last week simply did not happen the way the Warren Commission said it did. I state this because it is clear to me, from a strictly scientific point of view, based on my examination of available records, that the commission failed to make its case.

Moreover, it is my judgment that more than one person was involved in the shooting of President Kennedy. And I also believe that it is still possible to unravel the mystery—at least the scientific aspects of it.

The end of the thread is to be found in the assassination evidence in the National Archives, Washington, D.C. I was the first forensic pathologist—in fact, the first pathologist of any sort—outside the government to be permitted to inspect this evidence. I did so on August 23 and 24 of this year. Previous examinations were made only by the autopsy pathologists and a government-appointed panel in 1968.

However, I must emphasize at the outset that much of the autopsy evidence, including some of the most important material from the forensic standpoint, is



not at the National Archives. For example, we know that the President's brain was preserved and that several sections were prepared for microscopic examination. Moreover, certain sections were taken through the skin at the supposed wounds of entry in the scalp and the upper back of the President. The preserved brain and these various brain and skin tissue sections were examined by the autopsy team about two weeks after the original autopsy, and additional

photographs were then made. We know this because these items are described in the supplemental autopsy report included in volume 16 of the Warren Commission Exhibits. Yet, these items—the brain, the microscopic sections, and the supplemental photographs—are all missing from the National Archives.

Further, we know from testimony of Commander James J. Humes of the government autopsy team that color photographs were taken of the interior of the President's chest. These photos are crucial to a determination of the path of the bullet that purportedly entered the President's upper back. They are missing.

All these items were supposed to have been turned over to the National Archives on April 26, 1965, by Admiral George Burkley, but they are not included in the inventory of items officially given by Mrs. John F. Kennedy to the United States government on October 29, 1966. There has been no accounting for this discrepancy, and I have received no reply to my written inquiries addressed to the official representative of the Kennedy family.

Yet, even without these van-

ished materials, the remaining evidence specifically discredits the "single bullet" theory of the Warren Commission Report. This evidence also underscores certain procedural discrepancies and omissions in the way the entire investigation was handled from a scientific, medical point of view.

In light of the available evidence, as scrutinized by a forensic pathologist, there are at least three reasons why the single bullet theory is implausible and scientifically untenable:

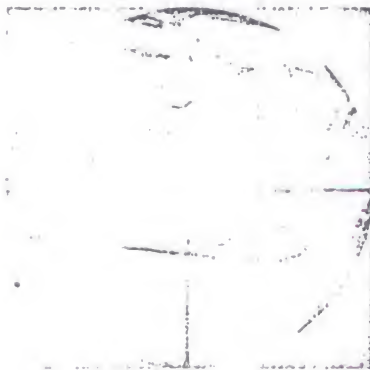
1. The bullet that is said to have struck both President Kennedy and Governor John B. Connally weighed, in its found state, approximately 159 gr. Such a 6.5 mm bullet in its pristine state weighs from 161 to 161.5 gr. Thus, the loss of substance in the found bullet was about 2 to 2.5 gr, or about 1.5 percent.

Yet this is the bullet that is alleged to have entered the right side of the President's back, coursing through the uppermost portions of the thorax and mediastinum and exiting from the midline of the anterior neck region at about the level of the knot of the tie. Thereafter, this same bullet is supposed to have entered the right side of Governor Connally's back, breaking his right fifth rib. It then exited from the anterior aspect of his right chest and entered his dorsal right wrist region, where it shattered the distal radius. Finally, it exited from the volar aspect of the wrist and entered his left thigh.

Now, an experienced forensic pathologist would expect a bullet that had done all this to have had a loss of substance much in excess of 1.5 percent.

Also, x-rays of the President's chest and the Governor's chest, right wrist, and left thigh show visible particles of material that everybody has agreed are metallic fragments from the bullet. Admittedly, these are quite small, but they are visible to the naked eye. It is my contention that it is simply not possible for a bullet to have left grossly visible, radiographically evident particles in four different anatomic locations in two human beings and to have emerged with a loss of substance of only approximately 2 gr out of a total of 161.

2. The bullet is fully jacketed in copper and measures about 3 cm in length. The upper 2 cm toward the nose of the bullet and the midportion of the bullet show no grossly visible deformities, areas of mutilation, loss of sub-



In FBI reenactment of assassination, view through rifle scope from Texas School Book Depository window reveals that bullet would pass through JFK stand-in and probably strike Governor Connally in buttocks. But Dr. Wecht points out that film taken during shooting shows Connally seated to right of stand-in's position. What this means, Dr. Wecht says, is that bullet would have had to make an impossible turn to strike Connally in right back.

stance, or any other kind of significant scathing.

There is one small piece that was removed from the jacket by an FBI agent for spectrographic analysis, and the agent noted this in the records.

Otherwise, there is no deformity of the upper two-thirds of the bullet. The lower one-third shows minimal flattening, giving the impression that there was a slight squeezing of the bullet and a very minimal outpocketing of the inner metallic core on focal portions of the copper rim at the base of the bullet.

(If one can picture a volcano that has erupted slightly, with some of the lava coming up to the rim and congealing at certain points there, that is the general appearance of the bullet at its base.)

This is *not* the appearance of a bullet that has struck and fractured two bones, particularly the wrist bone. I say "particularly" because of that bone's thickness and density and the extensive fracturing that occurred.

A bullet that had caused such damage would have been more deformed and more mutilated (in a technical sense) and would have shown more markings and more loss of substance. Moreover, visual examination of this bullet shows that its copper jacket is completely intact. None of its weight loss, small as it is, could have come from any part of the bullet other than its base—that portion of the bullet that in normal flight is least exposed to fracture or impact forces during penetration of tissues. The nose of the bullet, the portion most exposed to such forces, is entirely smooth,

Special article

except for the notch made by the FBI in taking a sample for spectrographic examination.

3. This single bullet, according to the Warren Report, came from the sixth floor window of the Texas School Book Depository Building. It therefore came on a definite angle of about 10 degrees from the right, as well as from above and behind the President. It entered the upper right side of the President's back and, again according to the Warren Commission, exited in the midline of the anterior neck, grazing the knot of the President's tie on the left side as it came out.

Also, traveling at this significant angle from right to left, states the report, the bullet struck no bone in the President's body and was not deflected by any kind of firm or rigid object either inside or outside the body.

However, Governor Connally, who was sitting directly in front of the President, as can be seen in the Zapruder film at the National Archives, was also supposedly struck by this same bullet. He was struck in the back near the right axilla, as all the testimony and exhibits show.

This means that the bullet, moving from right to left, entering the right side of the President's back and exiting from the midline of the neck anteriorly, had to have done a rather phenomenal thing: Just after exit, it would have had to make a fairly acute angular turn around the knot of the President's tie in midair, back toward the right, to enter the far right side of Governor Connally's back!

A diagramming of the course of the bullet clearly indicates

that without this impossible turn, it would have passed the Governor on the left side.

If we take great liberties with the assumed position of Governor Connally, the bullet might have entered his back somewhere to the left of his vertebral column, but certainly not to the right of the midline.

I am surprised that only a very few people, even among the critics of the Warren Commission Report, have referred to this matter. And, of course, the commission's protagonists, defenders and apologists simply ignore it. It is the kind of thing that the commission never addressed itself to, never answered, never evaluated.

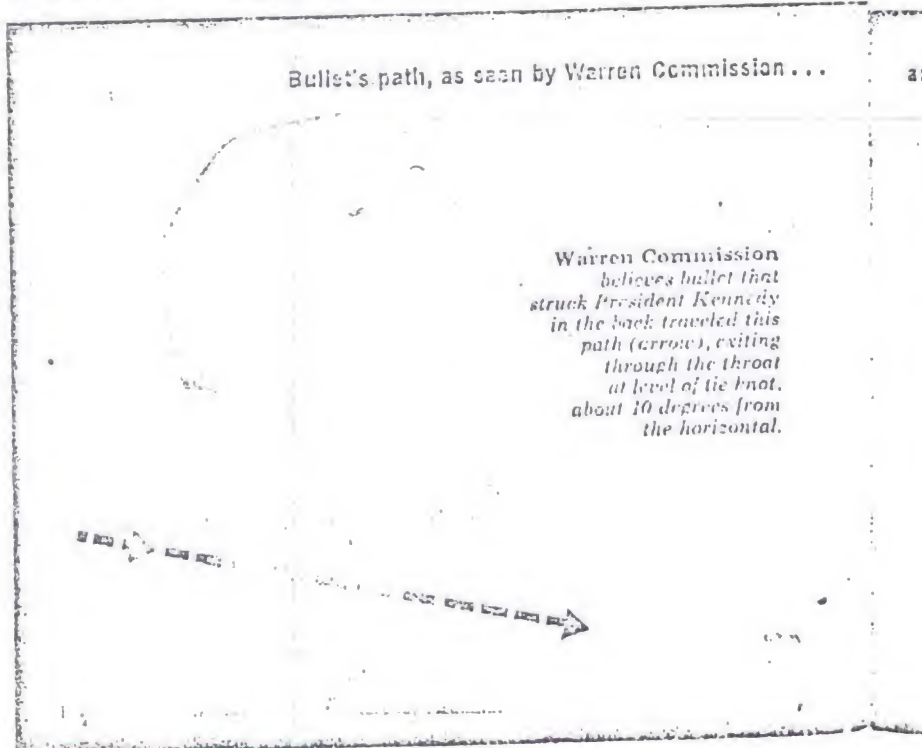
If confronted with the question, the commission people say:

"Well, you can't be sure exactly what the President and Governor Connally were doing at the time; maybe the car lurched, and maybe somebody was thrown," and so on.

But there is no evidence that these things did happen, and much evidence that they did *not*.

These "maybe" defenses of the Warren Commission's conclusions are motivated by the same feeling of necessity that led to the single bullet theory itself. The fact that the alleged murder weapon, a sluggish, bolt-action, war-surplus rifle, could not be reloaded, reaimed and fired a second time in less than two and one-half seconds, plus the fact that Governor Connally was known to have been wounded

Bullet's path, as seen by Warren Commission...



less than two seconds after the President's first wounding, forced the commission to postulate that both men were hit by the same bullet.

That is the only way that one person, whether Lee Harvey Oswald or anyone else, could have done all the shooting, and the commission needed that conclusion very badly. Because if one person could not have done the shooting, and there were two or more people involved, we have by legal definition a conspiracy—something much more sinister than the Warren Commission would have us believe.

I believe that there was a second assassin, most likely firing from the rear, but not necessarily from the Texas School Book De-

pository Building. So far as the available materials show, there might even have been shots fired from the front and right, from the so-called grassy knoll area.

The reason for this equivocation is that the bullet hole in the President's neck was described by physicians who observed it when they worked on him in Dallas as circular, symmetrical, small, uniform, etc. This led several of them who had seen a fair number of gunshot wounds to conclude that it was a wound of entrance, not exit.

Once it was determined that the bullet had ripped through the trachea, that wound was utilized, and understandably so, as the site of a tracheostomy. The pathologists who did the autopsy

some seven to eight hours later at Bethesda Naval Hospital did not report having made any attempt to reconstruct the wound by pulling its edges together. As a matter of fact, they did not even realize at the time they did the autopsy that the tracheostomy had been superimposed upon a preexisting bullet hole!

Because of the missing autopsy materials, the autopsy findings do not stand on their own as scientific proof of a rear source of the shots. Instead, external data such as witness reports from Dealey Plaza had to be relied on to justify this conclusion. Indeed, a newspaper story is cited in the official autopsy report!

Likewise, because the microscopic autopsy slides were not available to me at the National Archives, I cannot determine whether all the shots were fired from the rear, or whether some were fired from the right front.

The missing slides could show microscopic characteristics of the epidermis and dermis that one sees with wounds of entrance and that are not found in wounds of exit. A forensic pathologist reviewing such a case as this should see such slides, if they exist. I find it rather disturbing that people who have previously reviewed the evidence have not commented on the absence of the slides and did not state that their unavailability seriously compromised any conclusions they reached.

As to the missing brain, photographs in the National Archives of the superior portions of the brain reveal a dark gray-brown object, generally parallelogram-shaped and measuring roughly 1½

and Dr. Wecht's view of the same evidence

Dr. Wecht challenges government's angle. Line to sixth floor window of Texas School Book Depository was more than 20 degrees from the horizontal. Commission reconciles this discrepancy by suggesting that JFK was leaning forward when struck. But Dr. Wecht says film shows the President sitting erect one second before first shot was fired.

by $\frac{3}{4}$ in. It has a slight focal shimmering effect in some pictures that could just be photographic artifacts or could be due to some light reflection caused by materials contained in the object.

Now, what the object is, I don't know. It could be a fragment of a bullet, or a brain tumor, or a vascular malformation. But, most amazing to me is that the autopsy pathologists, who could not have missed seeing it, never mentioned it! The review panel in 1968 did mention its presence and went on to say they could not tell what it was, but that was all.

Isn't such an item obviously significant in a case of gunshot wound(s) of the head?

The autopsy pathologists properly decided not to examine the brain in its "fresh," hemorrhagic state at the time of autopsy, but fixed it in formalin and went back to it for a supplemental examination exactly two weeks later.

However, at this time, they still didn't examine the brain, but simply took a few sections from the edges, stating in their report that "coronal sections of the brain are not made in order to preserve the specimen."

Especially in a case like this, coronal sections—parallel cuts spaced every $\frac{1}{2}$ in. or closer from one side of the brain to the other—are the proper and routinely uniform way to examine a brain. In this manner, you can follow the bullet track(s), locate foreign objects, and so on. If you do not do this, you cannot know what the full extent of the pathology is in the brain.

To voluntarily omit such an examination is to be incompetent

or a fool, and I do not believe the autopsy pathologists were either. I believe that they were *instructed* not to do a complete examination of the brain. The decision was not theirs.

So, without engaging in wild speculation, I think we can say that it is very clear that the brain should have been sectioned but was not, and that the brain was available at the time of autopsy but is not now.

Also, I think it is very clear that the autopsy pathologists did not comment on that object in the brain because, again, they were *instructed* not to.

I am disappointed that the review panel, which did see the object and did comment on it, but then passed it over, did not say in their conclusions: "We have to see the brain; we have to see the microscopic tissue slides. Unless we can examine these items of physical evidence, it is scientifically impossible for us to corroborate the conclusions of the Warren Commission Report."

I have requested from the official representative of the Kennedy family in this matter, in addition to his help in locating these missing materials, that they be made available, with the items already at the National Archives, to an independent team of experts.

I have specifically asked for the opportunity to go back to the Archives as a forensic pathologist with a group of specialists in neurosurgery, radiology, criminalistics, firearms investigation, and questioned document examination.

With all these people involved from a scientific viewpoint with

this case, along with all the materials previously made available, and with several other tests that could be done, I think we would find the *real* answer to President Kennedy's assassination.

It is important to note here that two tests would answer some of the most urgent questions. Although spectrographic analysis was ordered—and presumably done—the results have never been made available. Also, neutron activation analysis—a test that was not performed—would enable us to match fragments of infinitesimal size with a known object. This could be done with the bullet (Exhibit 399) and the fragments still in the Archives. All this is vital information.

However, I am still waiting for a reply to my requests, which were made three months ago. In light of the obvious scientific inconsistencies and incomplete examinations, it is indeed most puzzling why the government and representatives of the Kennedy family would not be eager to cooperate in a bona fide attempt to resolve these critical problems in a sound, objective and impartial medical fashion.

Dr. Wecht is research professor of law and director of the Institute of Forensic Sciences, Duquesne University School of Law, Pittsburgh, and coroner of Allegheny County, Pennsylvania. He is a diplomate of the American Board of Pathology in Anatomic and Clinical Pathology and Forensic Pathology and is past president of the American Academy of Forensic Sciences (1971-72) and the American College of Legal Medicine (1969-72).